



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/813,812

03/31/2004

Mark E. Pecen

CS90104

7551

20280 7590 04/10/2008

MOTOROLA INC  
600 NORTH US HIGHWAY 45  
W4 - 39Q  
LIBERTYVILLE, IL 60048-5343

EXAMINER

NGUYEN, KHAI N

ART UNIT

PAPER NUMBER

2614

NOTIFICATION DATE

DELIVERY MODE

04/10/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DOCKETING.LIBERTYVILLE@MOTOROLA.COM  
ADB035@Motorola.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/813,812	<b>Applicant(s)</b> PECEN ET AL.	
	<b>Examiner</b> KHAI N. NGUYEN	<b>Art Unit</b> 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☒ Claim(s) 21-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment filed on January 11, 2008 has been entered. Claims **1** and **12** have been amended. No claims have been canceled. Claims 19-22 have been added. Claims 1-22 are still pending in this application, with claims **1** and **12** being independent.

### ***Terminal Disclaimer***

2. The terminal disclaimer filed on January 11, 2008 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Claim Objections***

3. The newly added claims 21 and 22 are objected to because of the following informalities: Claims 21-22 are recited "The method of claim 12, - - -", but independent claim 12 is recited "A communication system - - -". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. The amended claims 1, 12, and the newly added claims 19-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 is amended to recite “detecting, by the secondary communication network, a presence of the communication device”. Similarly, claim 12 is amended to recite “wherein a presence of the communication device is detected by the secondary communication network”. But, the instant application's specification and FIG. 2 and FIG. 4 show only the support for “detected by the **particular secondary communication network upon receiving a request from the communication device** to access the **particular secondary communication network**” (See instant application's specification page 6, lines 14-17 and FIG. 2 and FIG. 4 step 412). Therefore, it appears that the claimed invention is added new matter (i.e., detected by the secondary communication network of the plurality of secondary networks “**unspecified/any** secondary communication network”).

The newly added claims 19 and 21 are rejected for the same reasons set forth above as in claims 1 and 12.

The newly added claims 20 and 22 recite "the routing area selector is **isolated** from the primary and secondary communication networks". But, the instant application's specification and FIG. 6 show only the support for "the routing area selector is **coupled** to the alternative network controller", therefore the routing area selector is apart of the alternative network controller which is connected to the primary and secondary communication networks. There is no support for isolation (See instant application's specification page 8, lines 8-11, and FIG. 6, and independent claim 12 recites "a routing area selector coupled to the alternative network controller, - - -").

### ***Claim Rejections - 35 USC § 102***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-7, 9-10, 12-15, 17, and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Kalavade et al. (U.S. Publication Number 2002/0191575 A1 hereinafter "Kalavade").

Regarding claim 1, Kalavade teaches a method in a communication system for selecting a routing area for establishing communication between a primary communication network having a primary routing area and a communication device through a secondary communication network (Fig. 4, 60 "GPRS cells", 62 "Routing Area", paragraph hereinafter "par" [0062] lines 1-3), the communication device

supporting a cellular core network signaling protocol of the primary communication network and having a primary identification (Fig. 4, 54 “Converged Wireless Gateway”, paragraphs [0063], and [0067]), the method comprising:

creating a plurality of secondary routing areas (Fig. 4, 60 “Cell area”, par [0062] line 2), each of the plurality of secondary routing areas comprising at least one of a plurality of secondary communication networks (par [0054], i.e., wireless LAN “secondary communication networks”), each of the plurality of secondary communication networks capable of providing a communication coverage for the communication device (par [0067] lines 1-4);

detecting, by the secondary communication network (par [0068] lines 5-7, i.e., communication device requests authentication with the secondary communication network), a presence of the communication device through a particular secondary communication network of the plurality of secondary communication networks (par [0068], i.e., detects the presence by periodically broadcast beacons and receives the request for authentication from communication device);

determining a target routing area of the plurality of secondary routing areas, the target routing area having the particular secondary communication network (par [0069], lines 1-3, i.e., go out of the network “target routing area”); and

re-directing services originally directed to the primary identification of the communication device in the primary communication network to the target routing area by the primary communication network (par [0071], i.e., the GPRS network “primary communication network”).

Regarding claim 2, Kalavade teaches a method wherein creating a plurality of secondary routing areas includes:

assigning the plurality of secondary routing areas to an alternative network controller, the alternative network controller capable of establishing communication between the primary communication network and the communication device in the target routing area through the alternative network controller (Fig. 4, 54 Converged Wireless Gateway (CWG) “alternative network controller”, par [0053], and par [0073]).

Regarding claim 3, Kalavade teaches a method wherein establishing communication between the primary communication network and the communication device in the target routing through the alternative network controller by the alternative network controller (Fig. 7, 54 CWG, par [0084]) includes:

converting a protocol of the secondary communication network into the cellular core network signaling protocol of the primary communication network; and

converting the cellular core network signaling protocol of the primary communication network into the protocol of the secondary communication network (Figs. 7-8 par [0084], and par [0087]).

Regarding claim 4, Kalavade teaches a method wherein establishing communication between the primary communication network and the communication

device in the target routing through the alternative network controller by the alternative network controller includes:

- setting up a tunnel between the communication device and the alternative network controller; and

- controlling the tunnel (Fig. 11, par [0093], i.e., tunnel and de-tunnel packets to the CWG “alternate network controller”).

Regarding claim 5, Kalavade teaches a method wherein detecting a presence of the communication device through a particular secondary communication network of the plurality of secondary communication networks includes:

- receiving a request from the communication device to access a particular secondary communication network of the plurality of secondary communication network by the particular secondary communication network of the plurality of secondary communication networks (Fig. 7, 10 Mobile Stations of Hotspot 1 “secondary communication network” and Hotspot 2 “other secondary communication network”, par [0084];

- assigning a secondary identification to the communication device in response to receiving the request (par [0086] lines 1-4, i.e., IMSI for GPRS network); and

- authorizing the communication device to access the particular secondary communication network of the plurality of secondary communication networks (par [0086] lines 5-6, i.e., CWG “alternative network controller” maintain the access).

Regarding claim 6, Kalavade teaches a method wherein determining a target routing area of the plurality of secondary routing areas, the target routing area having the particular secondary communication network includes:

receiving a secondary routing area identification of the target routing area by the primary communication network (Fig. 10, par [0088], lines 2-3, i.e., IMSI); and

receiving the secondary identification of the communication device by the primary communication network (Fig. 10, par [0088], lines 3-4, i.e., IP address).

Regarding claim 7, Kalavade teaches a method of re-directing services originally directed to the primary identification of the communication device in the primary communication network to the target routing area by the primary communication network includes:

associating the primary identification of the communication device with the secondary identification of the communication device by the primary communication network (paragraphs [0069]-[0070], i.e., 802.11 device with user's identification (e.g., IP address)); and

re-directing the services originally directed to the primary identification of the communication device to the secondary routing area identification of the target routing area (par [0071], i.e., the GPRS network "primary communication network").

Regarding claim 9, Kalavade teaches a method wherein determining a target routing area of the plurality of secondary routing areas, the target routing area having the particular secondary communication network further comprises:

determining by the alternative network controller a secondary routing area identification of a proximate target routing area proximate to the target routing area based upon the secondary routing area identification of the target routing area (Fig. 4, par [0064], i.e., CWG “alternative network controller” will be associated with a few hotspots “secondary routing area” based on geographic proximity).

Regarding claim 10, Kalavade teaches a method of re-directing services originally directed to the primary identification of the communication device in the primary communication network to the target routing area by the primary communication network includes:

associating the primary identification of the communication device with the secondary identification of the communication device by the primary communication network (Fig. 4, paragraphs [0069]-[0070], i.e., 802.11 device with user’s identification (e.g., IP address)); and

re-directing the services originally directed to the primary identification of the communication device to the secondary routing area identification of the target routing area and to the secondary routing area identification of the proximate target routing area (Fig. 4, paragraph [0071], i.e., the GPRS network “primary communication network”).

Regarding claim 12, Kalavade teaches a communication system configured to select an appropriate routing area (Figs. 1-2, Fig. 4), the communication system comprising:

a primary communication network configured to support a primary cellular core network signaling protocol, the primary communication network having a primary routing area (Fig. 2, Fig. 4, 18 SGSN (Serving GPRS Service Node), 62 Routing Area, par [0062]);

an alternative network controller coupled to the primary communication network, the alternative network controller configured to communicate with the primary communication network using the primary cellular core network signaling protocol (Fig. 4, 54 CWG “alternative network controller”, par [0063] lines 1-2, Figs. 7-8, par [0084] lines 1-2, and par [0087] lines 1-2);

a plurality of secondary communication networks coupled to the alternative network controller, each of the plurality of secondary communication networks configured to support a secondary communication network protocol, the plurality of secondary communication networks grouped into a plurality of secondary routing areas, each of the plurality of secondary routing areas comprising at least one of the plurality of secondary communication networks (Fig. 4, 60 - 802.11 Cell “secondary communication network”, Cell Area 1-3 “secondary routing areas” – 802.11 “secondary communication network protocol”, Fig. 4, 54 CWG “alternative network controller” - paragraphs [0062]-[0063]);

a communication device coupled to a particular secondary communication network of the plurality of secondary communication networks, the communication device having a primary identification and configured to support the primary cellular core network signaling protocol and the secondary communication network protocol, wherein a presence of the communication device is detected by the secondary communication network (Fig. 4, 802.11 device “communication device”, paragraphs [0067]–[0086], i.e., network signaling protocols and detects the presence of the communication device by periodically broadcast beacons and receives communication device request authentication with the secondary communication network); and

a routing area selector coupled to the alternative network controller, the routing area selector configured to identify a target routing area having the particular secondary communication network (Fig. 4, 18 SGSN “routing area selector”, 54 CWG “alternative network controller”, 62 Routing Area 1-3, paragraphs [0062]–[0063]),

wherein the alternative network controller is further configured to direct services initially directed to the primary identification of the communication device to the target routing area and to establish communication between the primary communication network and the communication device through the alternative network controller (Fig. 4, 54 Converged Wireless Gateway (CWG) “alternative network controller”, par [0053], and par [0073]).

Regarding claim 13, Kalavade teaches the communication system wherein the alternative network controller further comprises a protocol converter configured to

convert the primary cellular communication core network signaling protocol into the secondary communication network protocol, and to convert the secondary communication network protocol into the primary cellular core network signaling protocols (Figs. 7-8, 54 CWG “alternative network controller”, par [0084], and par [0087]).

Regarding claim 14, Kalavade teaches the communication system wherein the alternative network controller further comprises a tunnel controller configured to set up, maintain, and control a tunnel between the communication device and the alternative network controller (Fig. 11, 74 Client Software “tunnel controller”, par [0093], i.e., tunnel and de-tunnel packets to the CWG “alternate network controller” and par [0094]).

Regarding claim 15, Kalavade teaches the communication system wherein the routing area selector is further configured to identify available secondary communication networks associated with the target routing area (Fig. 4, 18 SGSN “routing area selector”, 54 CWG “alternative network controller”, 62 Routing Area 1-3, paragraphs [0062]-[0063]).

Regarding claim 17, Kalavade teaches the communication system, wherein the routing area selector is further configured to determine a proximate target routing area proximate to the target routing area and to further identify available secondary communication networks associated with the proximate target routing area (Fig. 4, 18

SGSN “routing area selector”, 54 CWG “alternative network controller”, 62 Routing Area 1-3, par [0064], i.e., geographic proximity).

Regarding claims 19 and 21, Kalavade teaches the method and the system, wherein the presence of communication device is detected when the secondary communication network receives a request from the communication device to access the particular secondary communication network (Fig. 4, 802.11 device “communication device”, par [0068] lines 5-7, i.e., detects the presence of the communication device by periodically broadcast beacons and receives communication device request authentication with the secondary communication network).

Regarding claims 20 and 22, Kalavade teaches the method and the system, wherein the target routing area is determined by a routing area selector isolated from the primary and secondary communication networks (Fig. 4, 18 SGSN “routing area selector”, 54 CWG “alternative network controller”, 62 Routing Area 1-3, paragraphs [0062]-[0064]).

### ***Claim Rejections - 35 USC § 103***

8. Claims 8, 11, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalavade, in view of Bryson (U.S. Publication Number 2004/0185777 A1).

Regarding claims 8, 11, 16, and 18, Kalavade discloses everything claimed as applied above (see claims 7, 10, 15, and 17). However, Kalavade does not specifically include the pagers as one of the communication device in their method and system (i.e. to page the communication device). Although Kalavade teaches the mobile stations (MS) which are described as wireless client devices (such as, e.g., laptops, cell phones or PDA with a GPRS NIC (Network Interface Card)) (Kalavade – Fig. 1, 10 MS, par [0047] lines 1-6).

In the same field of endeavor, Byron teaches the method and system associated with a plurality of user devices that can be routed from a first routing area to a second routing area (Byron – Fig. 11, par [0104]), and this plurality of user devices have the pagers include means for wireless applications (e.g., to page the communication device) (Byron – par [0002]). The advantage of Byron is extending the range of the user devices without increasing the radiated power and thus reducing the user exposure to radiated energy and alleviating concerns of regulatory agencies (e.g., EMI, CE, and UL) (Byron – par [0009] lines 5-11).

It would have been obvious to a person of ordinary in the art at the time of the invention was made to apply a known technique to a known device (i.e., using pagers as a communication device in the communication networks) ready for improvement to yield predictable results (see KSR – MPEP 2143). Therefore, it would have been obvious to a person of ordinary in the art to incorporate the use of the pagers, as taught by Byron, into the method and system of Kalavade in order to enhance the support for the plurality of communication devices in the communication networks.

***Response to Arguments***

9. Applicant's arguments filed January 11, 2008 have been fully considered but they are not persuasive.

Regarding independent claims 1 and 12, Applicant argues that Kalavade does not disclose "detecting, by the secondary communication network, a presence of the communication device," and "the presence of communication device is detected when the secondary communication network receives a request from the communication device to access the particular secondary communication network," (See Applicant's Remarks page 13 lines 3-7).

Examiner respectfully disagrees with Applicant's argument because Kalavade clearly discloses the presence of communication device is detected when the secondary network receives a request from the communication device to access the particular secondary network, and more specifically, Kalavade teaches the communication device is requested authentication with the secondary communication network (See Kalavade - Fig. 4, 802.11 device "communication device", par [0068] lines 5-7, i.e., detects the presence of the communication device by periodically broadcast beacons and receives communication device request authentication with the secondary communication network).

Regarding newly added claims 19-22, see the above rejection of claims 19-22.

***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI N. NGUYEN whose telephone number is (571)270-3141. The examiner can normally be reached on Monday - Thursday 6:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad F. Matar can be reached on (571) 272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2614

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. N. N./  
Examiner, Art Unit 2614

04/01/2008

/Ahmad F. MATAR/  
Supervisory Patent Examiner, Art Unit 2614